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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

BLACKWELL RUDASIL, GWENDOLYN A

ART UNIT PAPER NUMBER

1775

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,642

Applicant(s)

CASTRO ET AL.

Examiner

Gwendolyn A. Blackwell-Rudasill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 44-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/5/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the Paper dated is acknowledged. The traversal is on the ground(s) that February 5, 2004. This is not found persuasive because the claims 1-43 are directed to an article and claims 44-61 are directed to a method of manufacture. These are different statutory classes of invention and MPEP § 806.05(f) states that these inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process. In the case at hand the examiner has averred that the product as claimed can be made by a materially different method. The examiner has further established a prima facie case of a burden by establishing a different classification for these two different statutory groups of invention. Applicants have made no argument that the claimed alternative method is improper.

2. If the product claims are subsequently found allowable, withdrawn process claims, which depend from or otherwise include all the limitations of the allowable product claim will be considered for rejoinder. *MPEP 821.04*.

The requirement is still deemed proper and is therefore made FINAL.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

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F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 29, 31-43 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,648,638. Although the conflicting claims are not identical, they are not patentably distinct from each other because each disclose a polycrystalline aluminum oxide ceramic having an average grain size of less than 1.0 micron and a contrast ratio of less than about 0.7 wherein the ceramic is used for dental appliances.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by European Patent

Application Publication no. 0 284 418 B1, EP '418.

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EP '418 discloses a translucent ceramic product made from aluminum oxide material with additives such as magnesia and yttria, (column 1, lines 11-16). The grains of the ceramic material are preferred to be less than 2 micrometers or less, (column 2, lines 24-25). Example 5, as shown in Figure 5, is made mostly of alumina with 0.05 magnesium oxide added having good translucence, an average grain size of less than 1.1 micrometers, and a flexure strength of 784.6 MPa, meeting the requirements of claims 1-9.

Although EP '418 does not specifically disclose the contrast ratio and the wet transmittance, absent an objective evidentiary showing to the contrary, keeping in mind that arguments are not evidence, a chemical composition and its properties are inseparable. *MPEP 2112.02*. Because the prior art exemplifies applicant's claimed composition in relation to the aluminum oxide material and flexure strength, the claimed physical properties relating to the contrast ratio and wet transmittance are inherently present in the prior art therefore not providing patentable distinction over the prior art.

7. Claims 1-16, 19-29, and 32-41 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent no. 6,417,127, Yamamoto et al.

Regarding claims 1-16, 19-29, and 32-41

Yamamoto et al disclose a translucent polycrystalline ceramic wherein the mean particle size of the crystal particles is less than 1 micrometer with a density of at least 99.8% having a total light transmittance of at least 60%, 70%, or 75%, (columns 2-3, lines 31-23). The alumina has a purity of greater than 99.95 vol%, (column 3, lines 38-48). Yttrium oxide can be added in amount of less than 2 mol%, (column 4, lines 7-13). Table 2 demonstrates that the mean particle size of the alumina is less than 1 micrometer as measured from a polished surface with the

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bending strength being greater than 800 MPa as shown for examples 2-5, (columns 9-10, lines 5-65). The polycrystalline ceramic can be used an outer tube for a lame, a light emitting tube, a window plates, medical use, optical filters, etc, (column 1, lines 12-30).

Although Yamamoto et al do not specifically disclose the contrast ratio, absent an objective evidentiary showing to the contrary, a chemical composition and its properties are inseparable. *MPEP 2112.02*. Because the prior art exemplifies applicant's claimed composition in relation to the particle size, strength and transmittance of the aluminum oxide material, the claimed physical property relating to the contrast ratio is inherently present in the prior art therefore not providing patentable distinction over the prior art record.

Regarding claims 19-29, and 32-41

If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). *MPEP 2111.02*. The intended use of the polycrystalline translucent aluminum oxide as a dental mill blank or a ceramic dental prosthesis does not provide a structural difference between the applicant's claimed invention and the coated substrate of the prior art. Absent an objective evidentiary showing to the contrary that applicant's aluminum is patentably distinct from the coated substrate of the prior art, the preamble is not given patentable distinction over the prior art.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Patent Application Publication no. 01/13862, WO '862, in view of United States Patent no. 6,417,127, Yamamoto et al.

WO '862 disclose ceramic mill blanks comprised of a light transmissive crystalline ceramic having a contrast ratio of less than about 0.7, (abstract). The mill blank can be formed into restoratives, replacements, inlays, onlays, veneers, full and partial crowns, bridges, and implants, (page 5, lines 26-32). The polycrystalline material preferably has a density of at least 99% theoretical, (page 6, lines 22-28). Aluminum oxide is preferably used as the crystalline material with a purity of at least 99.5%. When used as mill blank the sintered crystalline

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material is attached to a mounting stub, (page 10, lines 1-10). The mill blank is also provided in a kit with color shades along with instructions for use, (page 12, lines 23-33). WO '862 do disclose the use of a polycrystalline material having a particle size of less than 1 micrometer.

Yamamoto et al disclose a translucent polycrystalline ceramic wherein the mean particle size of the crystal particles is less than 1 micrometer with a density of at least 99.8% having a total light transmittance of at least 60%, 70%, or 75%, (columns 2-3, lines 31-23). The alumina has a purity of greater than 99.95 vol%, (column 3, lines 38-48). Yttrium oxide can be added in amount of less than 2 mol%, (column 4, lines 7-13). Table 2 demonstrates that the mean particle size of the alumina is less than 1 micrometer as measured from a polished surface with the bending strength being greater than 800 MPa as shown for examples 2-5, (columns 9-10, lines 5-65). The polycrystalline ceramic can be used an outer tube for a lame, a light emitting tube, a window plates, medical use, optical filters, etc, (column 1, lines 12-30).

Although Yamamoto et al do not specifically disclose that the polycrystalline material can be used as a dental mill blank or dental prosthesis, Yamamoto et al has disclosed that the material has many different uses because of it's high transmission and high strength and hardness. As such, it would be within the skill of one in the art to modify the dental materials of WO '862 with the translucent polycrystalline ceramic alumina material of Yamamoto et al to create dental materials having high strength, high light transmission, and abrasion resistance, (Yamamoto et al, column 1, lines 6-30).

Response to Arguments

11. Applicant's arguments, see pages 11-14, filed February 5, 2004, with respect to the rejection(s) of claim(s) 1-43 under Pham, Rusin et al, and McLean et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is as set forth above.

12. Applicant's arguments filed February 5, 2004 have been fully considered but they are not persuasive with respect to EP '418.

13. Applicant contends that EP '418 do not teach or disclose an average grain size of no greater than 1.0 micron as measured on a polished surface.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., average grains size of no greater than 1.0 micron as measured from a polished surface) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn A. Blackwell-Rudasill whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 6:00 am - 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gwendolyn A. Blackwell-Rudasill
Examiner
Art Unit 1775

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